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and Advisory Action of January 10, 2006

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An apparatus for re-coding an image signal, which conducts re-coding processing using a decoded image signal subjected to coding processing as an input image signal, comprising:

a DCT unit for subjecting the input image signal to a discrete cosine transform (DCT);

a DCT coefficient counter for counting a feature amount on a <u>high or low</u> frequency-region basis using an unquantized DCT coefficient output from said DCT unit;

a picture type detector for detecting a picture type in coding processing in a previous stage, using the feature amount output from said DCT coefficient counter;

a coding control portion for determining coding parameters in re-coding in accordance with detection results of said picture type detector; and

a coding portion for conducting re-coding processing, using the coding parameters determined by said coding control portion.

2. (Original) The apparatus for re-coding an image signal according to claim 1, wherein said picture type detector includes, as a picture type to be detected, at least two of three kinds of picture types of an intra frame coding picture, a forward inter-frame predictive coding picture, and a bi-directional inter-frame predictive coding picture.

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3.   (Original) The apparatus for re-coding an image signal according to claim 1, wherein said DCT coefficient counter counts, as a feature amount, a sum of absolute values or a sum of squares on a frequency region basis of DCT coefficients, and

said picture type detector detects a picture type in accordance with variations with time of the sum of absolute values or the sum of squares thus obtained.

4.   (Original) The apparatus for re-coding an image signal according to claim 3, wherein said picture type detector detects, as an intra frame coding picture, a picture whose sum of absolute values or sum of squares in a high-frequency region is smaller than those of previous and subsequent pictures.

5.   (Original) The apparatus for re-coding an image signal according to claim 3, wherein said picture type detector detects, as an intra frame coding picture or a forward inter-frame coding picture, a picture whose sum of absolute values or sum of squares in a low-frequency region is larger than those of previous and subsequent pictures.

6.   (Original) The apparatus for re-coding an image signal according to claim 1, wherein said DCT coefficient counter counts, as a feature amount, the number of DCT coefficients whose absolute values are larger or smaller than previously set threshold values, and

said picture type detector detects a picture type in accordance with the obtained number.

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7.   (Previously presented) The apparatus for re-coding an image signal according to

claim 6, wherein said picture type detector detects, as an intra frame coding picture, a picture

having a smaller number of DCT coefficients, with respect to other pictures, whose absolute

values are larger than threshold values and a picture having a larger number of DCT coefficients,

with respect to other pictures, whose absolute values are smaller than threshold values.

8.   (Original) The apparatus for re-coding an image signal according to claim 1,

wherein said coding control portion determines coding parameters using the picture type detected

by the picture type detector.

9.   (Original) The apparatus for re-coding an image signal according to claim 1,

wherein said coding control portion determines coding parameters, using an intended coding

amount set in accordance with the picture type detected by the picture type detector.

10. (Currently Amended) A method for recoding a previously encoded image signal

using a decoded image signal as input, comprising:

transforming the decoded image signal;

counting features within the transformed decoded image on a high or low frequency-region

basis using an unquantized coefficient output provided by the transforming;

detecting a picture type of the encoded image signal associated with the previous

encoding based upon the counted features;

determining parameters for re-coding based upon the detecting; and

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recoding the decoded image signal based upon the determining.

11.   (Previously Presented)   The method according to claim 10, further comprising:

detecting at least two of three kinds of picture types of an intra-frame picture, a forward

inter-frame predictive coding picture, and a bi-directional inter-frame predictive coding picture.

12.   (Previously Presented)   The method according to claim 10, further comprising:

counting one of a sum of absolute values and a sum of squares over a region of

transformed image coefficients; and

detecting a picture type in accordance with variations with time of one of the sum of

absolute values and a sum of squares.

13.   (Previously Presented)   The method according to claim 12, further comprising:

detecting an intra-frame coding picture by determining whether one of the sum of absolute

values and the sum of squares in a first specified region is smaller than those of previous and

subsequent pictures.

14.   (Previously Presented)   The method according to claim 12, further comprising:

detecting one of an intra-frame coding picture and a forward inter-frame coding picture by

determining whether one of the sum of absolute values and the sum of squares in a second region

larger than those of previous and subsequent pictures.

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15. (Previously Presented) The method according to claim 10, further comprising:

counting a number of transformed coefficients having absolute values which are one of

larger and smaller than previously set threshold values; and

detecting a picture type in accordance with the number.

16. (Previously presented) The method according to claim 15, further comprising:

detecting an intra-frame coding picture by determining whether a picture having a smaller

number of transform coefficients, with respect to other pictures, having absolute values larger

than threshold values and a picture having a larger number of transform coefficients, with respect

to other pictures, having absolute values smaller than threshold values.

17. (Previously Presented) The method according to claim 10, further comprising:

determining coding parameters using the picture type.

18. (Previously Presented) The method according to claim 10, further comprising:

determining coding parameters using an intended coding amount set in accordance with the

detected picture type.

19. (Previously Presented) The method according to claim 10, wherein the transforming

further comprises a DCT.

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20. (Previously Presented) The method according to claim 12, wherein the transformed image coefficients are DCT coefficients and further wherein the region is a frequency region.

21. (Previously Presented) The method according to claim 13, wherein the transformed image coefficients are DCT coefficients and further wherein the first specified region is a high-frequency region.

22. (Previously Presented) The method according to claim 14, wherein the transformed image coefficients are DCT coefficients and further wherein the second specified region is a low-frequency region.

23. (Previously Presented) The method according to claim 16, wherein the transform coefficients further comprises DCT coefficients.